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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,206	10/09/2001	John M. Harris	CE08991R	5804

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EXAMINER	
WONG, WARNER	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/973,206	HARRIS, JOHN M.	
	Examiner	Art Unit	
	Warner Wong	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *8-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *8-12* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-7, drawn to communication technique for jitter adjustment, classified in class 370, subclass 516.

II. Claims 8-12, drawn to channel assignment for communication over free space, classified in class 370, subclass 329.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone voicemail exchanges with Steven May from October 18-19, 2006 a provisional election was made without traverse to prosecute the invention of John Harris, claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-12 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurittu (2004/0120309) in view of Kokko (US 5,790,534) and Shaffer (US 6,683,889).

Kurittu teaches a Voice-over-IP packet transmission method, comprising the steps of:

determining a radio frequency (RF) load metric corresponding to a base site, comparing the determined RF load metric, and determining a jitter buffer depth target based on the comparison (fig. 10 & paragraph 11, mobile decides (compares) using the overall delay (RF load metric) of the packets received from its base station whether to increase/decrease its jitter buffer size).

Kurittu fails to clearly remark that the packet delays are considered as a RF load metric.

Kokko teaches a packet transmission method where packet delays are considered as a RF load metric (col. 2, lines 5-10, base station determines not to (postpone) allocate channel resources to certain packet switched terminals based on loading condition), corresponding to a packet-switch transmission delay, see col. 1, lines 21-23).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify that the received delay of a packet transmission by a mobile is an indication (metric) of RF channel loading.

The motivation for combining the teachings is that it allows proper allocation of information to the capacity of the channel(s) (Kokko, col. 1, lines 29-34).

Kurittu fails to specifically teach:

comparing the determined RF load metric to an RF load threshold to produce a comparison.

Shaffer teaches a method for a jitter buffer which compares the determined delay (jitter) of ingress packets to a delay threshold to produce a comparison (fig. 6, steps 556-564) & col. 5, lines 28-37, updated delay/jitter values are used for determine if jitter buffer size change is required according to thresholds).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify using thresholds to compare & determine a jitter buffer depth/size as in Shaffer for the jitter buffer of Kurittu.

The motivation for combining the teachings is that it provides a jitter buffer sufficient buffering for a smooth capability for incoming packet sequences (Shaffer, col. 2, lines 2-6).

3. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurittu in view of Kokko and Shaffer as applied to claim 1 above, and further in view of Applicant's Admitted Prior Art (hereinafter referred as "ADPA").

Regarding claim 2, Kurittu fails to teach: when the determined RF load metric is greater than the RF load threshold, a jitter buffer depth target is used.

Shaffer teaches: when the determined RF load metric is greater than the RF load threshold, a jitter buffer depth target is used (fig. 6, steps 562 & 564 & col. 28-37, adjusted time due to updated delay/jitter/gap values greater than T2 threshold prompts a jitter size/depth change).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify using threshold to compare & determine a jitter buffer depth/size as in Shaffer for the jitter buffer of Kurittu.

The motivation for combining the teachings is that it provides a jitter buffer sufficient buffering for a smooth capability for incoming packet sequences (Shaffer, col. 2, lines 2-6).

Kurittu fails to teach that the communication is using retransmissions.

The ADPA teaches that the communication is using retransmission (p. 2, lines 8-10).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify that the communication of Kurittu uses retransmissions as in ADPA.

The motivation for combining the teaching is that by accounting for RLP retransmissions which leads to gaps, gaps in voices may be avoided (p. 2, lines 8-10).

Regarding claim 4, Kurittu fails to teach:

when the determined RF load metric is greater than the RF load threshold, determining to retransmit erroneously received frames.

The ADPA teaches: when the delay (determined RF load metric) is greater than the delay (RF load) threshold, determining to retransmit erroneously received frames (p. 2, lines 1-7, RLP protocol inherently transmits a NAK after a timeout period (delay threshold) upon not successfully receiving a packet from its sequence).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify the wireless transmission of Kurittu are uses the standardized RLP protocol as in ADPA.

The motivation for combining the teaching is that by accounting for retransmissions due to erroneously received data (p. 2, lines 8-10).

4. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurittu in view of Kokko, Shaffer and ADPA as applied to claim 2 above, and further in view of Simonsson (US 6,950,669).

Kurittu fails to teach: determining to transmit frames at a lower power level when the determined RF load metric is greater than the RF load threshold.

Simonsson suggests: determining to transmit frames at a lower power level when the determined RF load metric is greater than the RF load threshold. (fig. 6, step 604 & col. 7, lines 51-58, after compensating for base station/cell's packet data loading, the power level for individual channels for a mobile is lowered if the channel quality is higher (RF load metric is greater than RF load threshold) than that for the channel's pre-determined data rate (threshold)).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to use power level in compensating the (RF load metric) channel quality as in Simonsson for the RF compensation of Kurittu.

The motivation for combining the teaching is that it improves the channel quality in packet data mobile radio networks (col. 2, lines 8-11).

5. **Claims 5 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurittu in view of Kokko and Shaffer as applied to claim 1 above, and further in view of Uesugi (US 2003/0072266).

Regarding claim 5, Kurittu fails to teach: when the determined RF load metric is less than the RF load threshold, a jitter buffer depth target is used.

Shaffer teaches: when the determined RF load metric is less than the RF load threshold, a jitter buffer depth target is used (fig. 6, steps 560 & 561 & col. 28-38, adjusted time due to updated delay/jitter/gap values less than T1 threshold prompts a jitter size/depth change).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify using threshold to compare & determine a jitter buffer depth/size as in Shaffer for the jitter buffer of Kurittu.

The motivation for combining the teachings is that it provides a jitter buffer sufficient buffering for a smooth capability for incoming packet sequences (Shaffer, col. 2, lines 2-6).

Kurittu fails to teach that the communication uses a reduce number of retransmissions.

Uesugi teaches: a communication using a reduce number of retransmissions (fig. 3 & paragraph 44, when reception quality (RF load metric) is poor, number of retransmissions are reduced).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to reduce the number of retransmission when the channel quality (RF load metric) is poor as in Uesugi for the wireless transmission of Kurittu.

The motivation for combining the teaching is that it improves the efficiency of the (overall) transmission (Uesugi, abstract).

Regarding Claim 7, Kurittu fails to teach: when the determined RF load metric is less than the RF load threshold, determining to reduce a use of retransmissions of erroneously received frames.

Shaffer teaches: when the determined RF load metric is less than the RF load threshold, a jitter buffer depth target is used (fig. 6, steps 560 & 561 & col. 28-38, adjusted time due to updated delay/jitter/gap values less than T1 threshold prompts a jitter size/depth change).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to specify using threshold to compare & determine a jitter buffer depth/size as in Shaffer for the jitter buffer of Kurittu.

The motivation for combining the teachings is that it provides a jitter buffer sufficient buffering for a smooth capability for incoming packet sequences (Shaffer, col. 2, lines 2-6).

Kurittu and Shaffer combined fails to teach the limitation of: determining to reduce a use of retransmissions of erroneously received frames.

Uesugi teaches: when the determined RF load metric is less than the RF load threshold, determining to reduce a use of retransmissions of erroneously received

frames (fig. 3 & paragraph 44, when reception quality (RF load metric) is poor, number of retransmissions are reduced).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to reduce the number of retransmission when the channel quality (RF load metric) is poor as in Uesugi for the wireless transmission of Kurittu.

The motivation for combining the teaching is that it improves the efficiency of the (overall) transmission (Uesugi, abstract).

6. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurittu in view of Kokko, Shaffer and Uesugi as applied to claim 5 above, and further in view of Simonsson (US 6,950,669).

Kurittu fails to teach: determining to transmit frames at a higher power level when the determined RF load metric is less than the RF load threshold.

Simonsson suggests: determining to transmit frames at a higher power level when the determined RF load metric is less than the RF load threshold. (fig. 6, step 604 & col. 7, lines 51-58, after compensating for base station/cell's packet data loading, the power level for individual channels for a mobile is raised if the channel quality is lower (RF load metric is lower than RF load threshold) than that for the channel's pre-determined data rate (threshold)).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to use power level in compensating the (RF load metric) channel quality as in Simonsson for the RF compensation of Kurittu.

The motivation for combining the teaching is that it improves the channel quality in packet data mobile radio networks (col. 2, lines 8-11).

Response to Arguments

7. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong
Examiner
Art Unit 2616

WW

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SUPERVISORY PATENT EXAMINER